REMARKS

Careful consideration has been given to the Official Action of October 26, 2005 and reconsideration of the application as amended is respectfully requested.

The Examiner has considered that only claims 1, 103 and 209 are pending. The Examiner has rejected these claims on cited art.

The action of the Examiner is incorrect as the claims pending at the time of final rejection were claims 1-14, 16 -68, 103-114, 116-137, 176, 178 and 182-208. (Claims 182-208 were withdrawn from consideration). The amendment filed with the RCE on August 8, 2005 did not cancel any claims and erroneously listed three amended claims and failed to list or account for the remaining pending claims. Thus, the Official Action of October 26, 2005, is incomplete and should be vacated.

However, in order to expedite examination of the application a complete listing of the pending claims is now presented herein along with amendments thereof. Since the first action of October 26, 2005 is incomplete as to all but the claims amended with the RCE should the Examiner again reject the claims in a subsequent action this should not be made final.

1. The Examiner has rejected Claims 1, 103 and 209 under 35 U.S.C. 102(b) as being anticipated by US 5,866,433. In this connection, the Examiner's attention should be drawn to the following:

1.1 US' 433 discloses a sensor for measuring an analyte concentration based on the use of a transparent substrate carrying an array of metallic islands and a biorecognitive layer selected to adsorb the dissolved analyte. The analyte to be adsorbed binds a certain analyte-specific fluorescent compound which is also provided in the solution during the measurement. The selected fluorophor is of a kind that its quantum yield or its fluorescence spectrum significantly changes in the vicinity of the island layer. Thus, this technique utilizes an effect of and a measurement of a change in the optically excited fluorescence of the

fluorophor bound by the adsorbed analyte.

1.2 According to the technique of US' 433, the transmittance of the exciting light is substantially zero and hence is not of interest. This can be clearly seen from Figs. 1-4 of US' 433, showing the penetration depth D of the evanescent wave of the excitation radiation 12 (col. 5, lines 41-43). Consequently, the flourophors are excited and emit radiation (10 and/or 11) only within the penetration depth D.

1.3 It should be noted that the excitation radiation is strongly absorbed and reflected by the metallic island layer (col. 3, lines 24-45; col. 3 lines 25-31). This is one of the reasons bringing the transmission to zero.

1.4 The detection of the fluorescence is done at the same side with irradiation (col. 3, lines 46-50). Typically, the frequency of the fluorescence is different from the frequency of the excitation light.

1.5 Also, the portion of US' 433 referred to by the Examiner relates to general consideration of the prior art in which the benefits of fluorescence are established. In particular, US' 433 in column 3, line 15 refers to conventional methods of interferometry of surface plasmon resonance. This is found disadvantageous because slight chemical changes in thin layers may be detected only with the use of complex measuring equipment. It is respectfully submitted that this generalized statement in the patent cannot remotely suggest that the technique of US' 433 utilizes plasmon absorption. Quite the contrary as Us'433 tecahes away from the vonentional technique so as to avodi the expressed disadvantages thereof.

1. 6 In contrast, to the technique of US' 433, the present invention utilizes a change in the structure's transmission profile (this is contrary to features of US' 433 as explained in 1.2-1.4 above) for a predetermined wavelength range (contrary to the feature of US' 433 as explained in 1.4 above) caused by a change in the surface plasmon absorption (see 1.5) of the structure when one or more certain substance(s) is/are adsorbed thereon.

Further, the technique of US' 433 requires a fluorescent probe and is based on metal island-enhanced fluorescence of the added probe. In this connection, please column 2, line 18 of US' 433: "(b) contacting the sample with an analyte-specific fluorescent compound of low quantum yield"; and column 2, line 28: "(e) determining the fluorescence radiation emitted by the bound analyte-specific fluorescent compound as a measure for the analyte concentration." On the contrary, the technique of the present invention is label-free and does not require a probe compound.

1.7 Hence, US' 433 is clearly not anticipatory or suggestive of the present invention.

For the reasons which have been given above, it is respectfully submitted that claims 1, 103 and 209 which have been acted on by the Examiner are not subject to rejection and it is further submitted that the remaining claims which are pending in the application are also allowable over US'433 for the reason which have been given hereinabove. Accordingly, favorable reconsideration of the application and allowance of the claims is earnestly solicited.

Respectfully submitted,

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